

City of

SAND SPRINGS

REDACTED VERSION

RECEIVED

12 MAY -7 PM 3:23

SUPERFUND DIV.
REMEDIAL BRANCH
(6SF-R)

PO BOX 338 • 100 EAST BROADWAY STREET • SAND SPRINGS, OKLAHOMA 74063-0338 • (918) 246-2500 • FAX (918) 245-7600

December 31, 2011

EPA
United States Environmental Protection Agency
Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Code 6SF-LP
Attention: Katrina Coltrain
Remedial Project Manager
Louisiana/Oklahoma Section

Re: Compass Industries Superfund Site – Operation and Maintenance
Tulsa County, Oklahoma

Dear Ms. Coltrain,

Thank you for your assistance with our responsibilities relating to the subject site.

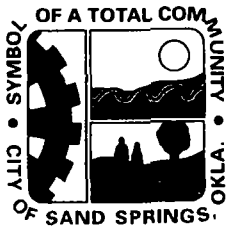
The Annual Operation and Maintenance Report for 2011 has been included, and is a record of operation and maintenance activities accomplished during calendar year 2011 by the City of Sand Springs, Oklahoma. The activities were based on the directions of The Second and Third Five-Year Reviews Final Report, Operation and Maintenance Plan, completed in 2001 and 2006; and recommendations outlined in the Fourth Five-Year Review Report of April 2011. The Vent Sampling Section was revised in 2009 to include specific sampling for Methane, which is reflected in the Table of Results for each 2011 Vent Sampling Period. The 2012 Annual Operation and Maintenance Report will reflect revisions to the operation and maintenance activities plan recommended in the Fourth Five-Year Review Report completed in April of 2011.

Please call at (918) 246-2590 if we can furnish additional information or be of additional service.

Sincerely,

Frank Weigle
Sand Springs Public Works Division Supervisor

Attachment: 2011 Annual Operation and Maintenance Report



City of

SAND SPRINGS

PO BOX 338 • 100 EAST BROADWAY STREET • SAND SPRINGS, OKLAHOMA 74063-0338 • (918) 246-2500 • FAX (918) 245-7101

COMPASS INDUSTRIES SUPERFUND SITE

Tulsa County, Oklahoma

2011

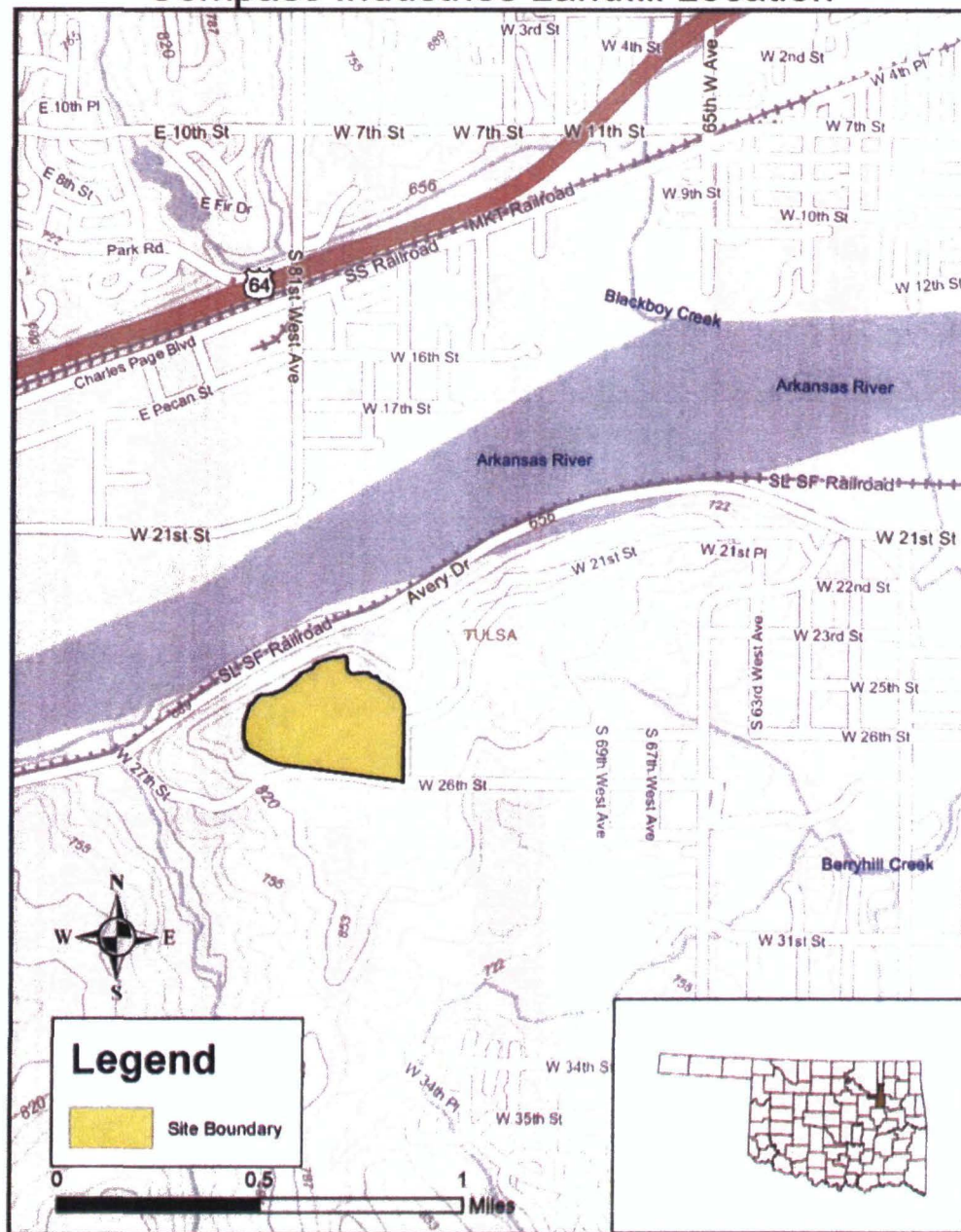
ANNUAL OPERATION AND MAINTENANCE REPORT

Submitted by

Public Works
City of Sand Springs
Sand Springs, Oklahoma

December 31, 2011

Compass Industries Landfill Location



Map created by Jacob Bankhead
on 8-9-2010

We make every effort to provide and maintain accurate, complete, usable, and timely information. However, some data and information on this map may be preliminary or out of date and is provided with the understanding that it is not guaranteed to be correct or complete. Conclusions drawn from, or actions undertaken on the basis of, such data and information are the sole responsibility of the user.

Figure 1: Site Location Map.

INTRODUCTION

The Compass Industries Site is an abandoned landfill located in a former limestone quarry west of Tulsa, Oklahoma in Tulsa County. Physically, the site is situated on a bluff approximately one-quarter mile south and 200 feet above the Arkansas River.¹

During the period of 1972 to 1976, the site was permitted and operated as a municipal solid waste landfill. The entire Compass Industries Site consists of approximately 125 acres, of which approximately 46 acres are located in the northeastern portion of the site and is the primary area of concern.²

During the 1970's, several fires were reported at the landfill. The most recent fires burned out in 1984. Local citizen complaints of odors prompted air monitoring which revealed the presence of some organics which have been considered non-hazardous.³

In July 1987, the Environmental Protection Agency (EPA) and Oklahoma State Department of Health (OSDH) entered into a Cooperative Agreement to undertake a Remedial Investigation (RI) and Feasibility Study (FS) at the site. EPA issued a Record of Decision in September 1987, referred to as the "ROD", in which the EPA selected a remedy for the area and discussed the reason for its decision. Monitoring activities performed under contract by Stelle & Associates, were included in the ROD.

The Second Five-Year Review Final Report, completed at the end of 2001, noted that plans were underway in 2001 for Operations and Maintenance activities to move from Stelle & Associates Inc. to the City of Sand Springs. Operations and Maintenance activities performed in 2001 were performed under contract with Stelle & Associates Inc. in accordance with the EPA approved O&M plan supplied by Sunoco and Texaco.

The Third Five-Year Review Final Report, completed in April 2006 detailed annual Operations and Maintenance procedures for the City of Sand Springs. The report also noted recommendations and follow-up to insure long-term protectiveness of the site including removal of encroaching trees and brush on the cap edge, erosion monitoring and maintenance as required including continued inspection of the vegetative cover and the cap and liner for evidence of damage from brush and burrowing animals. An institutional control (deed notice) was issued in September 2006 to restrict the uses of the land and minimize potential exposure to contaminants.

¹ Bechtel Environmental, Inc., "Operation & Maintenance Plan", Sec1.1, p. 1

² Ibid., p. 1-2

³ Ibid., p. 2

The Fourth Five-Year Review Final Report, completed in April 2011, indicated that the remedial actions set forth in the decision documents for the site continue to be implemented as intended; and identified recommendations and follow-up actions for the site. In summary, those identified include updating the Post Closure Operation and Maintenance Plan, discontinuation of surface water sampling activities, continuation of monitoring of water seep locations and sampling (if water present) prior to each five-year review, semi-annual inspections by the City of Sand Springs of the cap cover and liner system, and completion of site settlement surveys prior to each five-year review.

Table Of Contents

Introduction ---- pages 1, 2

Operation and Maintenance Plan:

Seep Sampling ----	page 3
Surface Water Sampling --	page 3
Site Inspections ----	page 4
Settlement Survey ----	page 5
Site Maintenance ----	page 5
Vent Sampling ----	page 6
Institutional Controls ----	page 6, 7

Attachments

Surface and Seep Water Location	1
Site Vent Locations	1A
Vent Sample, and Walkover Inspection Summary By (Stelle & Associates, Inc. of 7-29-11)	2
Vent Sample, and Walkover Inspection Summmary By (Stelle & Associates, Inc. of 12-8-11)	2A
Site Maintenance Purchase Orders (GMA Construction, Inc.)	3
Institutional Controls – The Bacon Group, LTD. Investigation Summary Report December 19, 2011	4

OPERATION AND MAINTENANCE PLAN

Seep Sampling – Every five years, if water is present. Data and description to be included in the five-year review. (Fourth five-year review report – April 2011).

Last Sampling – 2010 inspection of sites and monitoring (analysis not possible);
Previous - 1995 with analysis, 2000 and 2005 monitoring (analysis not possible).

Five sampling sites and two background sites identified in the 2000 Annual Monitoring Report submitted by Stelle & Associates Inc. and shown on attachment (Figure 1) remain the primary area of focus for scheduled sampling. In addition, the sample collection apparatus and methods described in the referenced 2000 Stelle & Associates report will be utilized for sample recording.

The seep locations defined were monitored monthly in 2000, and again for a period of time in 2005 with no resulting presence of water for collection and analysis. The defined seep sampling locations were monitored again in 2010 for the Fourth Five-Year Review, and there was no moisture present at any of sampling points.

(Stelle & Associates Report of May 29, 2010 – Figure 2.)

Next Scheduled Sampling – 2015

Surface Water Sampling – Every five years, if water is present. Data and description to be included in the five-year review. (Fourth 5-year review report – April 2011).

Last Sampling – May 21, 2010 for the Fourth Five-Year Report.

Laboratory results for the 2010 sampling showed no chemicals present above the monitoring levels. Most parameters were below detection limits. See Stelle & Associates Report dated June 7, 2010 (Figure 5). The sampling equipment, site locations noted in attachment (Figure 1), and general methods used are described in the 2000 Annual Monitoring Report by Stelle & Associates Inc.

Next Scheduled Sampling – The Final Fourth Five-Year Review Report recommended that Surface Water Sampling be discontinued effective April 2011.

Site Inspections – Semiannually. Description to be included in the Annual O&M Report and the five-year reviews. (Fourth 5-year review report – April 2011).

Last Report – 2010 Site Inspections – Annual Report

Year 2011 – Site Inspections (July and December Walkovers)

Stelle and Associates, Inc. Reports of July 29, 2011 and December 8, 2011 (Attachment Figures 2 and 2A).

Site Mowing, Brush Control, Gate and Fence Repair – by (GMA) Gentry-McDonald-Austin Construction, Inc. - (Attachment Figure 3).

The vegetative cover is well established and remains healthy. The site is covered with native grasses except in the main drainage swale where Bermuda was planted to control erosion. The native and Bermuda grasses continue to naturally seed and mix. The vegetative cover is adequately holding the cap soil in place and no erosion sites were evident. All previously repaired erosion sites have blended into the environment. The rip-rap material supplemented to that existing at the west end of the drainage swale in 2001 is providing adequate cover of the geotextile. Woody vegetation was removed from an area along the northern slope in 2001, 2005, and 2008; **and the entire cap 46 acre perimeter in 2010, and again in 2011.**

Woody vegetation growth was monitored around the cap edges and slopes during the July and December 2011 walkovers. **The 46 acre cap grasses were cut, baled and removed from the site in the summer of 2011. The perimeter brush removal procedure of 2011 will enhance the cap liner protection and overall site maintenance.** No evidence of damage to the cap or liner system from brush or burrowing animals was discovered during the walkovers, mowing, and perimeter brush removal operations in 2011.

The drainage system appears to be working properly, and the wet areas at the west end below the cap toe commonly remain after most other areas have dried. These areas do dry after a prolonged dry spell and were mowed in 2011. The cyclic wetting and drying described in the 2001 Five-Year Review Final Report is the standard used for seasonal monitoring and identifying out of ordinary change.

The cap perimeter is secured by chain-link fence with a barbed-wire top and locked gates. There is no evidence of continued or long-term use of the site, although evidence that unauthorized persons have been on the site has been noted. The evidence includes theft of warning signs and broken gates. Other vandalism or damage to the cap has not occurred.

Next Site Inspection – Summer 2012

Settlement Survey – Every five years. Data and description to be included in the five-year review. (Fourth 5-year review report – April 2011).

Last Survey – July 28, 2010

The Cap Settlement Marker Elevation Survey Report dated July 29, 2010 (for the Fourth Five-Year Review Report) by Breisch & Associates (Figure 4) indicates only slight change from previous surveys.

	Markers					
Year	1	2	3	4	5	6
1994	860.73	847.47	846.09	832.58	N. A.	823.34
2001	860.75	847.42	846.06	832.55	822.25	823.34
2006	860.76	847.43	845.99	832.58	822.47	823.39
2010	860.69	847.46	845.91	832.61	822.29	823.08

The method, control positions, and marker positions described in the Breisch & Associates letter of February 28, 2006 will be utilized in the future.

Next Survey – 2015

Site Maintenance – As necessary, based on semiannual Site Inspections and Five-Year Reviews. Description to be included in the Annual O&M Report and the five-year reviews. (Fourth 5-year review report – April 2011).

In 2011 GMA Construction Inc. received Sand Springs P.O. 120617 and restored the integrity of the damaged chain-link fence, gates, warning signs, mowed the entire cap fence line and perimeter edge, and provided equipment and removed all woody vegetation around the entire 46 acre cap perimeter to stop any possible encroachment onto the cap. In 2011 GMA Construction, Inc. entered into a no cost Agreement with the City of Sand Springs to provide mowing services to mow the cap grasses. GMA also baled the grasses and removed the bales from the site in the summer of 2011. (See Figure 3).

Stelle and Associates, Inc. also perform and record walkover inspections relative to site maintenance requirements during their semiannual vent sampling activities. (Figures 2 and 2A).

Next Maintenance – As required

Vent Sampling – Semiannually. Data and description to be included in the Annual O&M Report and the five-year reviews. (Fourth 5-year review report – April 2011).

Last Sampling – May and December 2010

Current Sampling – July and December 2011

The vent emissions were sampled monthly through 2000 by Stelle & Associates Inc. with a Foxboro Organic Vapor Analyzer (OVA), equipped with a flame ionization detector. OVA readings ranged from below detection limits to 150 ppm.

Stelle & Associates, Inc provided service to locate, inspect, and record sample vent emission tests at the eleven (11) vents along the perimeter of the site cap (Figure 1A) on **July 29, 2011 and December 7, 2011**. The vents were tested utilizing a MiniRea 2000 Organic Vapor Analyzer (OVA) with Photo-Ionization Detector (PID). Prior to conducting the tests the OVA was calibrated with a 100ppm isobutylene span gas. In the July 2011 sampling vent emissions were checked for **Methane** using a Photovac Micro Flame-Ionization Detector (FID). In the December 2011 sampling vent emissions were checked for **Methane** using a Thermo Scientific TVA 1000 Flame-Ionization Detector (FID). Each FID was calibrated for **Methane** and fitted with a carbon filter on the intake, in order for readings to be specific for **Methane** on each sampling event. An upwind background reading of the **Methane** level was noted at each vent. A TSI Velocichcek 8340 was used to measure the flow rate of the emissions from each vent on each sampling event. **The results from each meter are summarized on the tables attached to the Stelle & Associates, Inc. reports for the subject July 29, 2011 and December 7, 2011 Sampling Events. See Attachments (Figures 2 and 2A).**

Next Sampling – July and December 2012

Institutional Controls – Semiannually. Status to be reported in the Annual O&M Report and the five-year reviews. (Fourth 5-year review report – April 2011).

Last Report – 2010

Current Report 2011 – see Note 1

Note 1: Sand Springs took no additional action in 2005, 2006, and 2007 (see EPA letter July 1, 2005). The following is action by Sand Springs in 2004:

The second five-year final report makes reference to the EPA having had restrictions incorporated into the deeds for the sites known as the Compass Industries Superfund Site. The EPA also required that no activity occur which may damage the landfill cap.

Sand Springs retained the services of Cinnabar Service Company in 2004 to investigate land records at the Tulsa County Court House Records Office and discovered there are multiple owners, and trusts with ownership of the Compass Site land. The investigation, conducted for conveying deeds between the years 1987 to 2004, determined that no restrictions, regulations, or guidelines from the Environmental Protection Agency were outlined on any conveying deeds recorded during the seventeen years searched. Tract No. 4 adjacent to the cap does reference the superfund site.

The conclusion reached from the Cinnabar Service Company investigation was that the Compass Landfill Cap site (the area fenced and subject to this report) was not protected with the restrictions intended for incorporation into conveying property deeds recorded from 1987 to 2004.

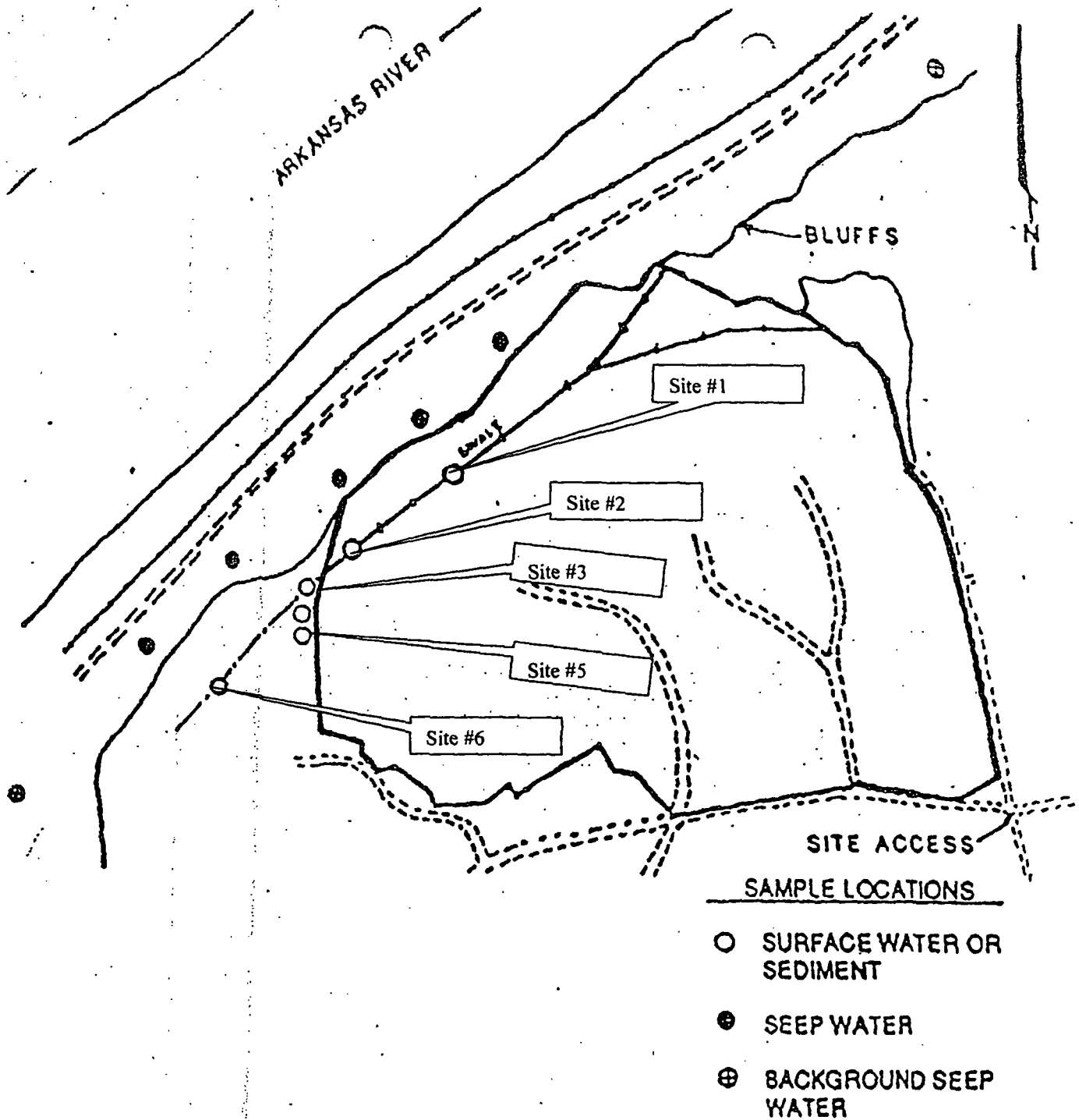
As a result of this investigation the Oklahoma Department of Environmental Quality (ODEQ), in consultation with EPA, did issue a deed notice (Notice of Remediation under CERCLA) involving the site in 2006. The deed notice is intended as an institutional control to restrict the uses of the land at the site and minimize potential exposure to contaminants.

The Bacon Group, LTD. (formerly Cinnabar Service Company) of Tulsa Oklahoma, who conducted the investigation in 2004 on behalf of Sand Springs, was commissioned to reinvestigate the land records and deeds in 2011 for the period from their last investigation ending November 30, 2010 to December 19, 2011 and found the following: (Attachment Figure 4).

- 1. No additional deeds of conveyance for the subject lands were filed in the period November 30, 2010 to December 19, 2011.**
- 2. A document was filed by the Oklahoma Department of Environment Quality Land Protection Division, filed of record on September 29, 2006, as defined in the Bacon Group, LTD. Summary Letter of December 19, 2011 protecting the subject lands.**

Next Report – 2012

Compass Industries Sampling Locations

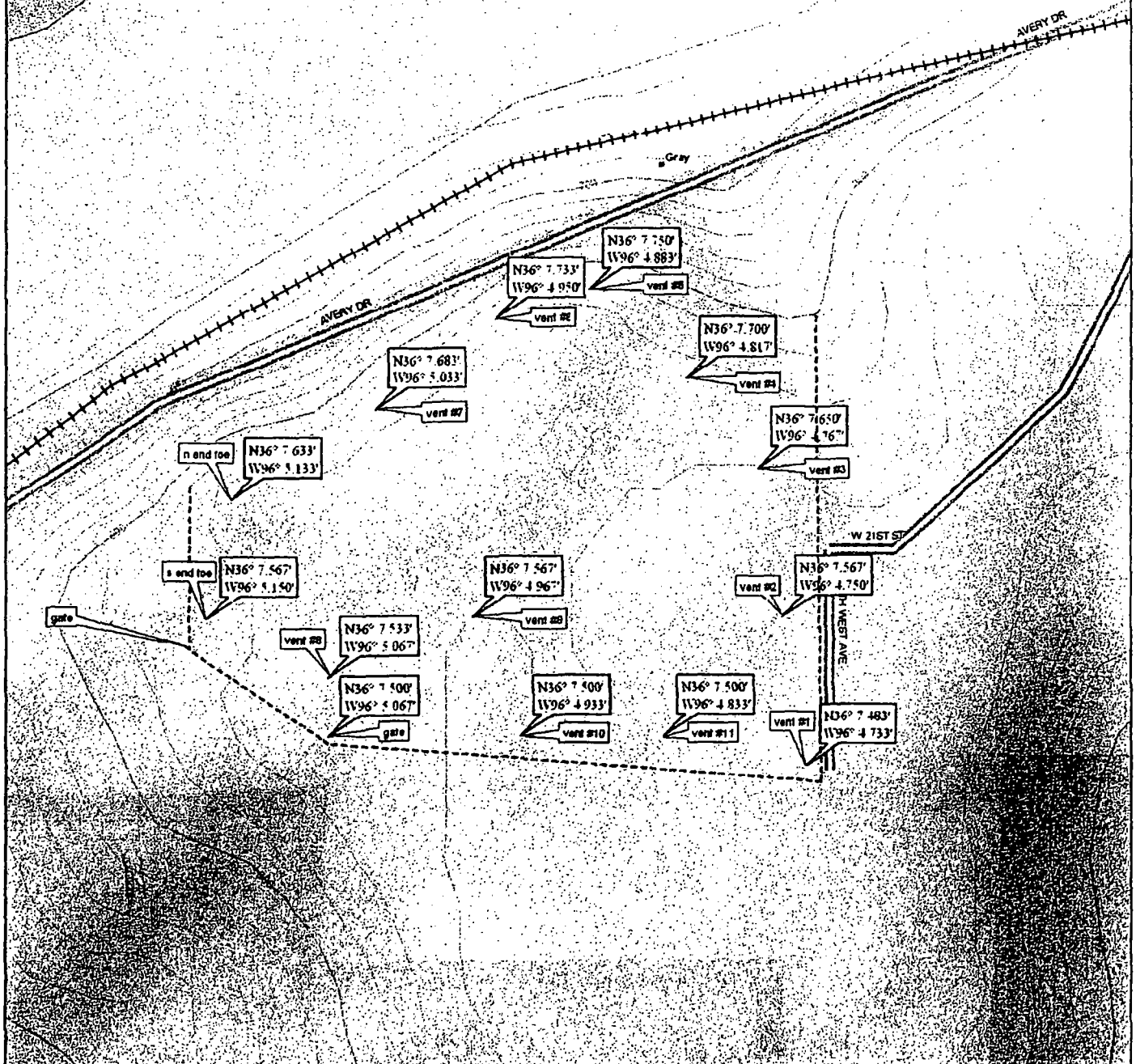


NOTE: The location of the monitoring points is approximate and will be limited to: 5 seep samples
2 background samples

FIGURE 1
SAMPLE PROGRAM LOCATION

ATTACHMENT 1

Compass Industries Site Vent Locations

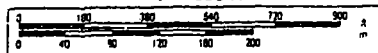


ATTACHMENT 1A



© 2002 DeLorme. Topo USA ®. Data copyright of content owner.
www.delorme.com

Scale 1 : 6,400
1" = 833 ft





Stelle & Associates, Inc.

ENVIRONMENTAL CONSULTANTS

July 29, 2011

Frank Weigle
City of Sand Springs
216 N Lincoln
Sand Springs, OK 74063-0338

RE: Compass Industries site vent sampling and inspection

Dear Frank:

At your request I inspected the capped area and tested the eleven (11) vents along the perimeter of the former Compass Industries site. This work was performed July 29, 2011. The weather at the time of the monitoring was clear, 90 degrees, with a slight south breeze.

The vents were tested utilizing a Mini Rea 2000 Organic Vapor Analyzer (OVA) with a Photo-Ionization Detector (PID). Prior to testing the vents the OVA was calibrated with a 100ppm isobutylene span gas. Vent emissions were checked for Methane using a Photovac Micro Flame-Ionization Detector (FID). The FID was calibrated for Methane and fitted with a carbon filter on the intake, in order for readings to be specific for Methane. An upwind background reading of Methane levels were noted at each vent. A TSI Velocicheck 8340 was used to measure the flow rate of the emissions from each vent. The results from each meter are summarized on the following table.

The vents were in good condition with all screens intact. The inspection of the cap revealed no problems. No other problems were observed.

There were two vents with readings over 900 ppm Methane. The PID readings ranged from 0 to 45.8 ppm.

If you have any questions or need further assistance please give me a call.

Sincerely,

J. Scott Stelle

ATTACHMENT 2

J. Scott Stelle R.E.M.
President

COMPASS INDUSTRIES - VENT SAMPLING DATA July 29, 2011

VENT NUMBER	FID READING (PPM)	FID BACKGROUND (PPM)	PID (PPM)	VELOCITY FT / MIN
1	3.6	4	0	1
2	3.4	4.1	4.3	10
3	952	4.6	22	10
4	3	5.7	19.3	12
5	2.7	3.7	17.1	14
6	2.2	4.2	27.4	17
7	9.1	3.8	14.2	10
8	1187	3.1	22.4	10
9	2.1	4.5	18.1	8
10	0.9	1.7	20	4
11	0.6	1.7	45.8	3



Stelle & Associates, Inc.

ENVIRONMENTAL CONSULTANTS

December 8, 2011

Frank Weigle
City of Sand Springs
216 N Lincoln
Sand Springs, OK 74063-0338

RE: Compass Industries site vent monitoring

Dear Frank:

At your request I inspected the capped area and tested the eleven (11) vents along the perimeter of the former Compass Industries site. This work was performed December 7 2011. The weather at the time of the monitoring was sunny, 48 degrees, with a very light North wind.

The vents were tested utilizing a Mini Rea 2000 Organic Vapor Analyzer (OVA) with a Photo-Ionization Detector (PID). Prior to testing the vents the OVA was calibrated with a 100ppm isobutylene span gas. Vent emissions were checked for Methane using a Thermo Scientific TVA 1000 Flame-Ionization Detector (FID). The FID was calibrated for Methane and fitted with a carbon filter on the intake, in order for readings to be specific for Methane. An upwind, background reading of Methane levels were noted at each vent. A TSI Velocicheck 8340 was used to measure the flow rate of the emissions from each vent. The results from each meter are summarized on the following table.

The vents were in good condition with all screens intact. The inspection of the cap revealed no problems. The perimeter fence was in good condition and the main gate was intact and secured. No other problems were observed.

Vents number one (1) and two (2) had positive readings for VOC's. Some level of Methane was noted on all vents except Numbers nine (9) and eleven (11).

If you have any questions or need further assistance please give me a call.

Sincerely,

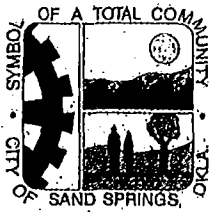
J. Scott Stelle

ATTACHMENT 2A

J. Scott Stelle R.E.M

COMPASS INDUSTRIES - VENT SAMPLING DATA December 7, 2011

VENT NUMBER	FID READING (PPM)	FID BACKGROUND (PPM)	PID (PPM)	VELOCITY FT / MIN
1	3200	4.2	2.5	11
2	1900	4.2	1.1	44
3	5542	22	0	24
4	2.5	4	0	34
5	1.4	1.4	0	22
6	3.7	2.2	0	49
7	2.43	2.1	0	12
8	987	1.7	0	12
9	0	1.35	0	5
10	12.1	0	0	21
11	0	0	0	20



PURCHASE ORDER

CITY OF SAND SPRINGS/MUNICIPAL AUTHORITY
ACCOUNTS PAYABLE
P.O. BOX 338
SAND SPRINGS, OKLAHOMA 74063

PURCHASE ORDER NO.

120617

PAGE: 1

DATE: 09/27/11

V
E
N
D
O
R

2555
GENTRY MCDONALD AUSTIN CONSTRU
PO BOX 415
SAND SPRINGS, OK 74063

S
H
I
P
T
O

CITY OF SAND SPRINGS
109 N GARFIELD AVE
SAND SPRGS, OK 74063

PROJECT NO.		CONTRACT NO.		REQUISITION NO.	
				20791	
REQUISITIONED BY		REQUISITIONED DATE	ACCOUNT NO.	P.O.B.	
FRANK WEIGLE		09/23/11	740-9320-434.30-31		
QUANTITY	UOM	DESCRIPTION		UNIT COST	EXTENDED COST
1.00	EA	MOW FENCE LINE, REPAIR EAST GATE AND FENCE AT GATE 1. Mow tall grass, weeds, small brush along the entire perimeter of the 46 acre cap site. Mow as close as machine will permit to the chain link fence, rock out crop faces and north cap edge as directed by the Sand Sprigs Representative to prevent the growth of brush that could encroach into the cap. Mow any areas on cap not cut during earlier grass removal. Cost \$600.00 2. Reinstall with concrete the gate support pole for the east gate. Replace the chain link fence material as needed that attaches to the gate pole and runs to the east. Cost \$505.00 Total cost for No's. 1&2 \$1,105.00. At no cost, form and replace the concrete broken at three vent pipe protection devices. Replumb the vent protection pipes. This work is to repair damage from previous grass mowing by the		1105.0000	1105.00

ATTACHMENT 3

I hereby certify that the amount of this encumbrance has been entered against the designated appropriation accounts and that this encumbrance is within the authorized available balance of said appropriation.

DATE

I hereby certify that the merchandise and/or services described above have been satisfactory received and that this purchase order is not a true and just debt to this City.

The above Purchase Order number must appear on all packages, shipping papers, invoices, and correspondence relating to this order.

APPROVAL

DATE

DATE

SIGNATURE



PURCHASE ORDER

PURCHASE ORDER NO.

120617

CITY OF SAND SPRINGS/MUNICIPAL AUTHORITY
ACCOUNTS PAYABLE
P.O. BOX 338
SAND SPRINGS, OKLAHOMA 74063

PAGE: 2

DATE: 09/27/11

V
E
N
D
O
R

2555
GENTRY MCDONALD AUSTIN CONSTRU
PO BOX 415
SAND SPRINGS, OK 74063

S
H
I
P
T
O

CITY OF SAND SPRINGS
109 N GARFIELD AVE
SAND SPRGS, OK 74063

PROJECT NO.		CONTRACT NO.		REQUISITION NO.	
				20791	
REQUISITIONED BY		REQUISITIONED DATE	ACCOUNT NO.	R.O.B.	
FRANK WEIGLE		09/23/11	740-9320-434.30-31		
QUANTITY	UOM	DESCRIPTION		UNIT COST	EXTENDED COST
		contractor.			
				SUB-TOTAL	1105.00
				TOTAL	1105.00

I hereby certify that the amount of this encumbrance has been entered against the designated appropriation accounts and that this encumbrance is within the authorized available balance of said appropriation.

DATE

The above Purchase Order number must appear on all packages, shipping papers, invoices, and correspondence relating to this order.

I hereby certify that the merchandise and/or services described above have been satisfactory received and that this purchase order is now a true and just debt to this City.

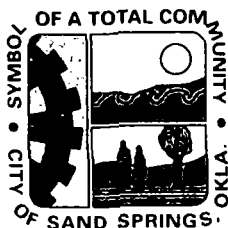
APPROVAL

DATE RECEIVED

RECEIVED BY

DATE

SIGNATURE



City of

SAND SPRINGS

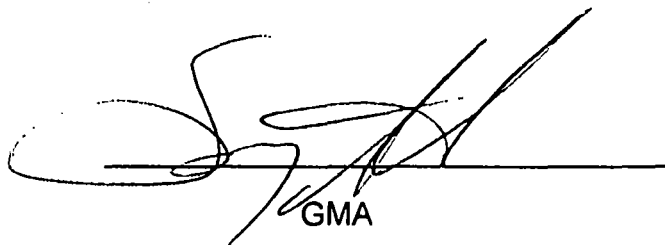
PO BOX 338 • 100 EAST BROADWAY STREET • SAND SPRINGS, OKLAHOMA 74063-0338 • (918) 246-2500 • FAX (918) 245-7101

August 3, 2011

AGREEMENT

This Agreement will confirm that GMA Construction shall cut and remove all varieties of natural grasses once during calendar year 2011 from the 46 acre Security Cap portion of the Compass Landfill Site for the purpose of natural improvement of the grass cover integrity at no cost to the City of Sand Springs, Oklahoma.

Removal of all cut grasses shall be completed by October 15, 2011, and the site gate keys shall be returned to the Sand Springs Public Works Representative at completion.



GMA

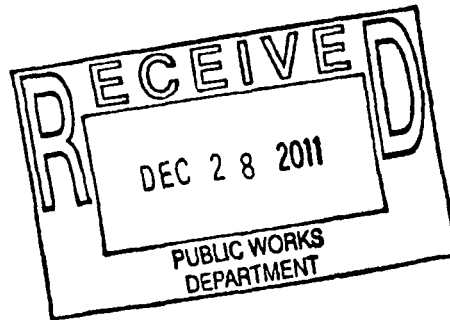
GENTRY-MCDONALD- AUSTIN
CONSTRUCTION

The Bacon Group, Ltd.

5109 South Wheeling, Suite 100
Tulsa, Oklahoma 74105
(918) 742-0082
Fax (918) 742-0097

December 19, 2011

Frank Weigle
City of Sand Springs
Public Works Department
109 N. Garfield
Sand Springs, OK 74063



Re: Compass Industries Superfund Site
Fifth Review

Dear Mr. Weigle:

As you are aware, the previous four (4) searches completed by Cinnabar Services Company of the Tulsa County Courthouse Records began on the above referenced site on August 17, 2004 and covered the years of 1987 to November 30, 2010. Those reviews of the Tulsa County Clerk and Tulsa County Court Clerk's records did not reveal any additional recorded regulations or guidelines from the Environmental Protection Agency and no restrictions were outlined on any of the conveying deeds recorded during the eighteen years searched, although the deed identified as tract 4 does make reference to the superfund site and the laws and regulations of the EPA and that a document filed by the Oklahoma Department of Environmental Quality Land Protection Division filed of record on September 29, 2006 a "Notice of Remediation or Related Action Taken Pursuant to the Federal Comprehensive Environmental Response, Compensation and Liability Act and Creation of Easement" "Deed Notice" "DEQ Case No.: 06-297 DN" identified as a tract of land being a part of Government Lots 2 and 4 Sec.17, T19N, R12E and being a part of Government Lot 6 and a part of the NE/4 of the SE/4 of Sec.13, T19N R11E that made reference to the land use restrictions for the superfund site and the laws and regulations of the EPA.

Pursuant to your recent instructions Bacon Royalties LLC conducted the fifth review of both the Tulsa County Clerk and Tulsa County Court Clerks records for the years November 30, 2010 to December 19, 2011 and found no additional deeds of conveyance for said lands.

Please feel free to contact me with any questions you may have regarding this report or my research. Thank you for the opportunity to serve you on this matter.

Sincerely,

William S. Bacon, Manager
Bacon Royalties LLC

ATTACHMENT 4

40143009200

Arkansas River

St Louis-San Francisco Railway

W-AVERY-DR-S

40143006600

JIMS INC

JIMS INC

SOUTH SHORE
DEVELOPMENT
LLC

SAND SPRINGS HOME

Burlington Northern Railroad

CITY
OF SAND
SPRINGS

A J B INC

(b) (6)

(b) (6)



(b) (6)

(b) (6)

40143006500

(b) (6)

(b) (6)

(b) (6)

(b) (6)

(b) (6)

(b) (6)

Owner Information JIMS INC
1925 E 5TH ST TULSA, OK 74104
Property Address SAND SPRINGS 000000000

Taxable Market		Assessed Value
Land	\$700	\$77
Improved	\$0	\$0
Mobile	\$0	\$0
Total	\$700	\$77
Exemptions		\$0
School District 10B	Net Assessed	\$77
School Levy \$115.38	Estimated Taxes	\$8.88

Land Information				
Land Use: Commercial				
Lots	Acres	SF	Width	depth
0	59.72	2601185	0	0
Description N/A				

Miscellaneous Structures			
Description	Yrblt	LxW	Units
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0

Building No. 0	Account Number R99218921824930
Sub Name: UNPLATTED	
Lot:	Block:
Area Name: BERRYHILL	
Section 18	Township: 19N Range: 12E

Sales Information			
Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0
Grantor:			
Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0
Grantor:			
Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0
Grantor:			

Mobile Home Information	
Serial No.	
Make	
Tag No.	LxW x

Building Elements	
Type	N/A
Style	N/A
Design	N/A
Quality	N/A Interior Finish N/A
Condition	N/A
Roof	N/A
Exterior Wall	N/A
Foundation	N/A Fireplace N/A
Heat	N/A Air N/A
Beds	0 Baths 0 Total Rooms 0
Garage	N/A Garage SF 0
Porch	N/A Porch SF 0
Basement	N/A Basement SF 0
Year Built	0 Eff Year Built 0 Year Remodeled 0
Square Footage	0
Commercial Elements	
Stories	N/A Story Height 00 Perimeter 0000
Units	0 Rent 000
Class Description	N/A

Legal Description
GOV LT 4 LYING N CL GRAVEL RD & GOV LT 3 LESS PRT LYING S R/W LN AVERY DR SEC 18 19 12 59.715ACS

Owner Information

(b) (6)

TULSA, OK 74137

Property Address

SAND SPRINGS 000000000

Taxable Market		Assessed Value
Land	\$300	\$33
Improved	\$0	\$0
Mobile	\$0	\$0
Total	\$300	\$33
Exemptions		\$0
School District 10B	Net Assessed	\$33
School Levy \$115.38	Estimated Taxes	\$3.81

Land Information

Land Use: Commercial

Lots	Acres	SF	Width	depth
0	24.09	1049562	0	0
Description N/A				

Miscellaneous Structures

Description	Yrblt	LxW	Units
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0

Building No.
0Account Number
R99218921830790

Sub Name: UNPLATTED

Lot: Block:

Area Name: BERRYHILL

Section 18 Township: 19N Range: 12E

Sales Information

Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0

Grantor:

Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0

Grantor:

Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0

Grantor:

Mobile Home Information

Serial No.

Make

Tag No. LxW x

Building Elements

Type	N/A
Style	N/A
Design	N/A
Quality	N/A
Condition	N/A
Roof	N/A
Exterior Wall	N/A
Foundation	N/A
Heat	N/A
Beds	0
Baths	0
Garage	N/A
Porch	N/A
Basement	N/A
Year Built	0
Square Footage	0

Interior Finish	N/A
Fireplace	N/A
Air	N/A
Total Rooms	0
Garage SF	0
Porch SF	0
Basement SF	0
Eff Year Built	0
Year Remodeled	0

Commercial Elements

Stories	N/A
Units	0
Class Description	N/A

Story Height	00
Rent	000

Perimeter	0000
-----------	------

Legal Description

PRT GOV LT 4 BEG SWC TH N803.92 NE1383.03 N672.78 SW105.13 NW159.33 NW68.39 NW301.32 NW34.70 NW142.84 NW188.67 NW100.89 W131.65 SW134.26 SW31.95 S803.92 POB SEC 18 19 12 24.095,

www.countyassessor.info
Tulsa County cords [OK]

Owner Information A J B INC PO BOX 471555 TULSA, OK 74147-1555 Property Address

Taxable Market		Assessed Value
Land	\$2750	\$303
Improved	\$0	\$0
Mobile	\$0	\$0
Total	\$2750	\$303
Exemptions		\$0
School District SS-108	Net Assessed	\$303
School Levy \$115.38	Estimated Taxes	\$34.96

Land Information				
Land Use: Agricultural				
Lots	Acres	SF	Width	depth
0	74.65	3251754	0	0
Description N/A				

Miscellaneous Structures			
Description	Yrblt	LxW	Units
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0

Building No. 0	Account Number R99113911305440
Sub Name: UNPLATTED	
Lot:	Block:
Area Name: BERRYHILL	
Section 13	Township: 19N Range: 11E

Sales Information			
Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0
Grantor:			
Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0
Grantor:			
Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0
Grantor:			

Mobile Home Information	
Serial No.	
Make	
Tag No.	LxW x

Building Elements		
Type	N/A	
Style	N/A	
Design	N/A	
Quality	N/A	Interior Finish N/A
Condition	N/A	
Roof	N/A	N/A
Exterior Wall	N/A	N/A
Foundation	N/A	Fireplace N/A
Heat	N/A	Air N/A
Beds	0	Baths 0 Total Rooms 0
Garage	N/A	Garage SF 0
Porch	N/A	Porch SF 0
Basement	N/A	Basement SF 0
Year Built	0	Eff Year Built 0 Year Remodeled 0
Square Footage	0	
Commercial Elements		
Stories	N/A	Story Height 00 Perimeter 0000
Units	0	Rent 000
Class Description	N/A	

Legal Description

N/2 SE LYING S & E OF AVERY DR LESS BEG 2212.79N & 61.38E SWC SE TH NE151.88 SE138.25 SW112.85 SW90.18 NW153.37 POB SEC 13 19 11 74.646ACS

Owner Information

(b) (6)

TULSA, OK 74105-8119

Property Address

Building No.
0Account Number
R99113911302430

Sub Name: UNPLATTED

Lot: Block:

Area Name: BERRYHILL

Section 13 Township: 19N Range: 11E

Sales Information

Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0

Grantor:

Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0

Grantor:

Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0

Grantor:

Mobile Home Information

Serial No.

Make

Tag No. LxW x

Building Elements

Type	N/A
Style	N/A
Design	N/A
Quality	N/A
Condition	N/A
Roof	N/A
Exterior Wall	N/A
Foundation	N/A
Heat	N/A
Beds	0
Baths	0
Total Rooms	0
Garage	N/A
Porch	N/A
Basement	N/A
Year Built	0
Eff Year Built	0
Square Footage	0
Interior Finish	N/A
Fireplace	N/A
Air	N/A
Garage SF	0
Porch SF	0
Basement SF	0
Year Remodeled	0

Commercial Elements

Stories	N/A	Story Height	00	Perimeter	0000
Units	0	Rent	000		
Class Description	N/A				

Taxable Market Assessed Value

Land	\$140	\$15
Improved	\$0	\$0
Mobile	\$0	\$0
Total	\$140	\$15
	Exemptions	\$0
School District 10B	Net Assessed	\$15
School Levy \$115.38	Estimated Taxes	\$1.73

Land Information

Land Use: Agricultural

Lots	Acres	SF	Width	depth
0	6.54	284882.4	0	0

Description N/A

Miscellaneous Structures

Description	Yrblt	LxW	Units
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0

Legal Description

PRT GOVT LT 6 BEG SECR TH W1320 N337.15 NELY 1535.62 S1098.7 POB LESS E750 SEC 13 19 11 6.543ACS

Owner Information JIMS INC
1925 E 5TH ST TULSA, OK 74104
Property Address

Taxable Market		Assessed Value
Land	\$320	\$35
Improved	\$0	\$0
Mobile	\$0	\$0
Total	\$320	\$35
Exemptions		\$0
School District 10B	Net Assessed	\$35
School Levy \$115.38	Estimated Taxes	\$4.04

Land Information				
Land Use: Agricultural				
Lots	Acres	SF	Width	depth
0	15	653400	0	0
Description N/A				

Miscellaneous Structures			
Description	YrBlt	LxW	Units
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0
N/A	0		0

Building No. 0	Account Number R99113911301780
Sub Name: UNPLATTED	
Lot: 6	Block:
Area Name: BERRYHILL	
Section 13	Township: 19N Range: 11E

Sales Information			
Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0
Grantor:			
Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0
Grantor:			
Sale Date	Sale Price	Book/Page	\$/SF
00000000	0	0/0	0
Grantor:			

Mobile Home Information	
Serial No.	
Make	
Tag No.	LxW x

Building Elements		
Type	N/A	
Style	N/A	
Design	N/A	
Quality	N/A	Interior Finish N/A
Condition	N/A	
Roof	N/A	N/A
Exterior Wall	N/A	N/A
Foundation	N/A	Fireplace N/A
Heat	N/A	Air N/A
Beds	0	Baths 0 Total Rooms 0
Garage	N/A	Garage SF 0
Porch	N/A	Porch SF 0
Basement	N/A	Basement SF 0
Year Built	0	Eff Year Built 0 Year Remodeled 0
Square Footage	0	
Commercial Elements		
Stories	N/A	Story Height 00 Perimeter 0000
Units	0	Rent 000
Class Description	N/A	

Legal Description

PRT GOVT LT 6 BEG SECR TH W1320 N337.15 NELY 1535.62 S1098.7 POB LESS W570 SEC 13 19 11 14.997ACS